

03631139

**CONSTRUCTION
PRODUCTS
DIVISION**

RESEARCH

SEP 24 1976

CONSTRUCTION PRODUCTS DIVISION

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REQUEST FOR TECHNICAL SERVICE

NUMBER: 49502
 GROUP: ZONOLITE, ORE
 DATE: September 23, 1976
 CHARGE NO.: 71-070
 REQUESTOR: J. Young/Libby
 MARKETING or MANUFACTURING APPROVAL
 NAME: _____
 APPROVED: _____

PROBLEM TITLE: TREMOLITE DETERMINATION OF LIBBY FLOTATION SAMPLES

SIGNIFICANCE:

SPECIFIC OBJECTIVE:

To determine tremolite content at various stages of operation for effective tremolite removal.

SUGGESTED APPROACH:

X-ray Method

DEADLINE (Last day information will be of value):

DETAILS OF PROBLEM:

ACCEPTED BY RESEARCH DEPT.:

*Julie C. Yang*DATE: 9/23/76

ASSIGNED TO: J. C. Yang

ADDITIONAL COPIES: Original to Library, H.A.Brown, H.C.Duecker, R.H.Locke, J.W.Wolter,
 R.Oliverio-G.G.Vaplon-J.Young/Libby, CPD-T&A
 File: 71-070

CONFIDENTIAL

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REQUEST FOR TECHNICAL SERVICE

NUMBER:	T&A 49502
GROUP:	ZONOLITE, ORE
ACTUAL COST:	\$230.00
REPORTING DATE:	September 23, 1976

EXPERIMENTAL

Sample Description:

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Five samples were submitted by J. Young of Libby operation for X-ray diffraction analysis.

The samples are:

(1)	Wet Mill Head Feed	July 15
(2)	Wet Mill Head Feed	July 16
(3)	Wet Mill Head Feed	July 22
(4)	90'φ Thickener Underflow	
(5)	Tails from the Electrostatic Separator	

X-Ray Diffraction Analysis:

Large specimens received from Libby (No. 1, 2 and 3), around 5 lbs. each, were quartered many times and samples to assure good representative sampling.

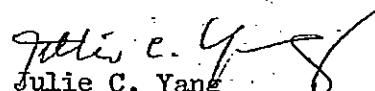
About 20 grams of the material were pulverized to -100 mesh size and subjected to x-ray diffraction analysis.

Percentage of tremolite was determined from the peak intensity readings ($2\theta = 10.55^\circ$, $d = 8.38\text{\AA}$) on the standard calibration curve.

RESULTS

Sample Description:	% Tremolite
1. Wet Mill Head Feed	7/15 12.5
2. Wet Mill Head Feed	7/16 15.5
3. Wet Mill Head Feed	7/22 9.5
4. 90'φ Thickener Underflow	13.9
5. Tails for Electrostatic Separator	11.5

The accuracy of these samples is about $\pm 0.5\%$, and samples were run in triplicate.



Julie C. Yang

JCY:mlr

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